

IEEE 1722a Assumptions

Dave Olsen
dave.olsen@harman.com

Subtype Assignment

- New subtypes
 - 0x02 AVTP Audio Format
 - 0x03 AVTP Video Format
 - 0x7a AVDECC Discovery
 - 0x7b AVDECC Enumeration and Control
 - 0x7c AVDECC Connection Management
 - 0x7d Media Clock Negotiation
- Note - each subtype includes both control and data

AVTP Audio

- Support PCM audio
- Event Markers
- DTCP Support
- HDCP Support

AVTP Video

- Support MJPEG
- Support new native AVTP formats
- Event Markers
- DTCP Support
- HDCP Support

Media Clock Negotiation

- Need a divide by 1.001 clock frequency
- Clock Quality field(s) need to be added between priority1 and priority2
- Clock Quality should be determined by PPM drift over time and temperature
 - Larger temperature range should indicate higher quality
- Do we need a tie breaker priority that is user settable??

Real Time Format Change (the HDMI problem)

- Include markers to indicate change
 - Prechange indication??
 - Format identifier??
 - Formats are prenegotiated
 - One bit could set to indicate a change is coming and then reset to indicate the change is here
- Required in AVTP audio/video formats
- Add bits to 61883 base formats
- Could this be used by the 802.1 multitalker problem??

Standard Management Variables/Counters

- Counters being considered
 - Missing sequence numbers
 - Sequence number breaks
 - Bad presentation times
 - Stream packets received
 - Missed stream packets counter on a per stream basis
 - Unexpected stream packets counter
 - Late arriving packets
 - Others??

1722 PICS

- 1722 only (no 61883 specific PICS)
- Need PICS for AVTP audio/video
- Need PICS for MCN

DTCP/HDCP

- Include bit fields to support DTCP/HDCP
- The DTCP spec uses the high order 2 bits of the sy field to support DTCP
- AVTP formats will provide 4 bits to be used by DTCP and HCDP
- Add 1 bit from a reserved field to support HDCP in the 61883 formats
- 1722 will not work with the DTLA to get approval
- 1722 will only provide what is needed such that someone else could get formats approved by the DTLA

Automotive Support

- CAN Gateway Protocol
- Flexray Gateway Protocol
 - FlexRay synchronization

Low Latency Security/Encryption

- Informative Annex
- MacSec – per link encryption
- 802.1X – per LAN authentication
- DTCP – end to end AES 128 encryption
- How do I secure a live performance?
 - Class A Stream latency

Synchronization bits

- Currently M0 and M1
- Do we need more bits? Maybe 4 bits
- M0 used for format change
- M1 used to synchronize external events
- Can we add these same bits to the 61883 streaming formats?

Other items?